



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,788	07/31/2003	Wen-Jen Kuo	BHT-3223-31	7881

7590 05/13/2004

TROXELL LAW OFFICE PLLC
SUITE 1404
5205 LEESBURG PIKE
FALLS CHURCH, VA 22041

EXAMINER

VRABLIK, JOHN J

ART UNIT	PAPER NUMBER
----------	--------------

3748

DATE MAILED: 05/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/630,788	Applicant(s) KUO, WEN-JEN	
	Examiner John J. Vrablik	Art Unit 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2004.
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
 4a) Of the above claim(s) 5 and 7-10 is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1,3,4,6 and 11-14 is/are rejected.
 7) ☒ Claim(s) 2 is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 31 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the independent annular ring in an annular recess of the piston of claims 10 and 14 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Figures 1, 3, 5A, 5B and 5C should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are further objected to because in Fig. 10A scrolls 10 and 20 should not be engaged axially similar to Figures 7A and 9A. Also, in Table 1, This "claim" should be changed to This --invention--. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 3748

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim 1 is rejected under 35 U.S.C. 102(a) as being anticipated by Sano et al. (Sano) (Figures 1 and 4A). The reference discloses an axial compliant means for a scroll machine, comprising a second scroll (2) revolving around a first scroll (1); a force being created by the pressure of a working fluid flowing through the medium pressure compression chamber (col. 7, lines 32-42); a piston (3) pushed by the force pushing both the second scroll and the first scroll to be axially in touch with each other; and an axial sealing status being achieved for both the scrolls being characterized by that multiple guiding posts (7 in Fig. 1 and pins A and B in Fig. 4A) being secured on the sliding travel of the piston; the sliding piston being guided by the guiding posts and the slanting angle of the sliding piston being decreased to achieve better axial sealing results for both the second scroll and the first scroll as claimed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sano in view of Caillat et al. (Caillat) (Fig. 3). The claims differ from Sano by reciting securing bolts secured to the frame, guiding posts secured to the bolts, and guided holes in the piston to receive the guiding posts. Caillat shows such a guiding post

Art Unit: 3748

arrangement with securing bolts (82) secured to the frame, guiding posts (78) secured to the bolts, and guided holes (86) to receive the guiding posts. It would have been obvious to one having ordinary skill in the art to substitute the guiding posts and securing bolts of Caillat for the pins of Sano to provide a more robust arrangement for guiding the piston and decreasing the slanting angle of the piston in Sano.

Claims 6 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sano in view of Bush et al. (Bush) (Fig. 1B). The claims add a pressure flow passage through the piston (claim 6) and an annular ring having sealing elements for the piston (claims 11-14). Bush teaches having an annular ring (50) for a piston (52, 54) and sealing elements (58, 60) for the annular ring and a pressure flow passage (50C) through the piston communicating with a medium pressure connecting flow passage (38) in the second scroll. It would have been obvious and not patentable to provide the piston of Sano with an annular ring having sealing elements and an intermediate pressure flow passage, as taught by Bush, to control the size of the force on the piston and improve the sealing of the pressure chamber of the force. Whether the annular ring is integral or independent from the piston would have been obvious matters of engineering design choice within the skill of the art and would not patentably define over the combination of references. The sealing of the pressure chamber for the force would be substantially the same with either an integral or independent annular ring.

Art Unit: 3748

Allowable Subject Matter

Claim 2 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Election/Restrictions

Claims 5 and 7-10 stand withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 04092004.

Conclusion

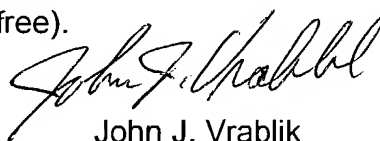
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wen-Jen et al. show a piston (21) for axially biasing the scrolls together, and Ukai teaches having guiding posts (95) to reduce inclination of a scroll member.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Vrablik whose telephone number is (703) 308-2629. The examiner can normally be reached on M-F (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (703) 308-2623. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3748

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John J. Vrablik
Primary Examiner
Art Unit 3748

jiv